

PAT-NO: JP410229980A  
DOCUMENT-IDENTIFIER: JP 10229980 A  
TITLE: INTELLIGENT KEY DEVICE

PUBN-DATE: September 2, 1998

**INVENTOR-INFORMATION:**

NAME	COUNTRY
OI, KAZUNARI	
SAKAGUCHI, NATSUE	

**ASSIGNEE-INFORMATION:**

NAME	COUNTRY
TOSHIBA CORP N/A	

APPL-NO: JP09036365  
APPL-DATE: February 20, 1997

INT-CL (IPC): A61B005/117

**ABSTRACT:**

PROBLEM TO BE SOLVED: To obtain an intelligent key device convenient to the user by collating fingerprint through the operation of an image pickup unit in the middle of a natural key operation and integrating a key input (or a handle operation) and a fingerprint collation.

SOLUTION: In there is no object on the upper face 101 of the input key 100, an incident light from the light source 201 is totally reflected to become total reflection light 203, passing through to the other side of the input key 100. However, with a finger 30 in contact with the upper face of the input key 100, irregular reflection occurs at the position of the projecting part of the fingerprint, with the scattered light 204 due to this irregular reflection converged by the lens in the lower face 103 of the input key 100 and with the image formed on the image pickup dace of a